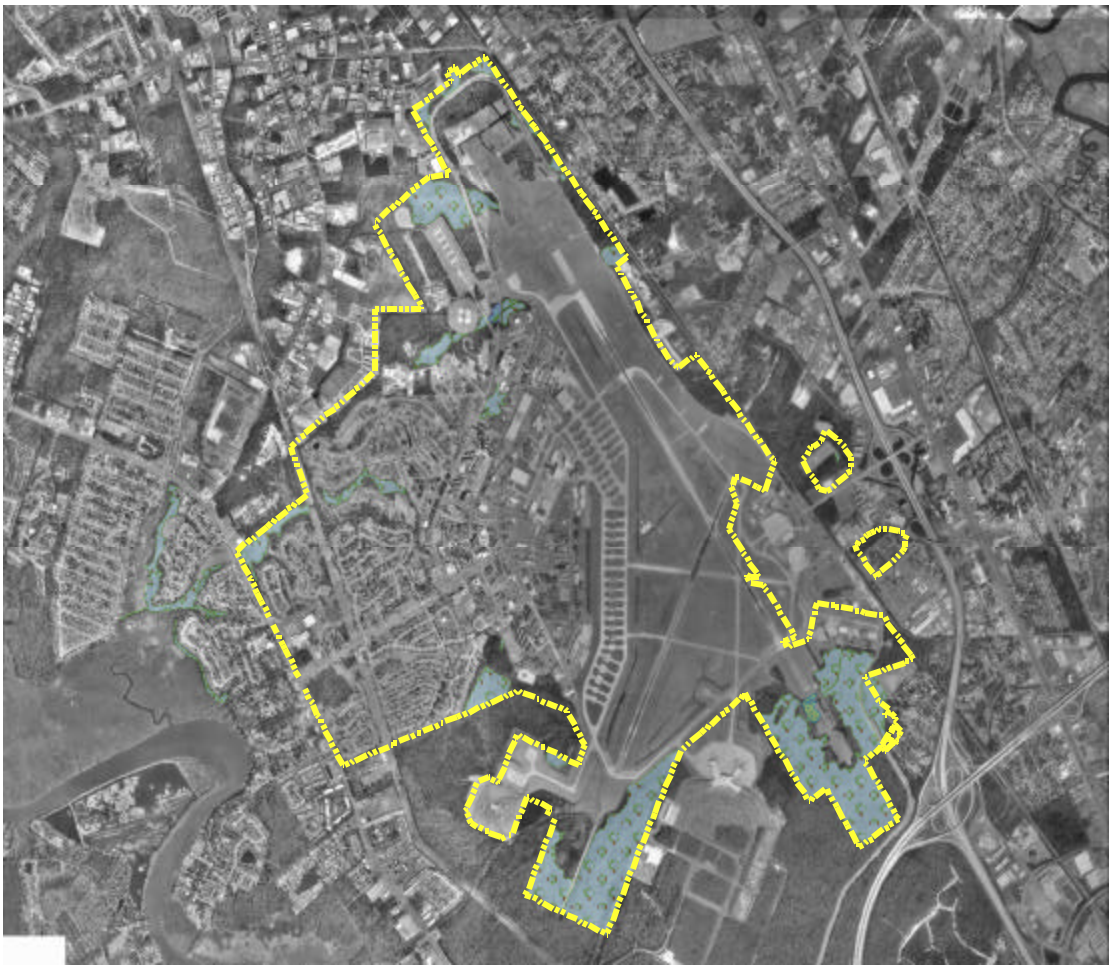
ENVIRONMENTAL ASSESSMENT (EA)
FOR
CONSTRUCTION OF BASE PERIMETER FENCE
AT
CHARLESTON AIR FORCE BASE



PREPARED BY
437 CES/CEVP
CHARLESTON AFB SOUTH CAROLINA
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US AIR FORCE-CHARLESTON AIR FORCE BASE

FINDING OF NO SIGNIFICANT IMPACT (FONSI)
CHARLESTON AIR FORCE BASE (CAFB) INSTALLATION OF PERIMETER FENCE

Pursuant to the Council on Environmental Quality regulations for implementing the procedural provisions of the National Environmental Policy Act (NEPA) and Code of Federal Regulations 32 CFR 989, the U.S. Air Force's Charleston AFB has prepared an Environmental Assessment (EA) for this action. The purpose of the EA is to determine the extent of environmental impact that may result from removal, replacement, and installation of perimeter fencing at CAFB and to evaluate whether these impacts, if any, will be significant.

DESCRIPTION OF PROPOSED ACTION

The US Air Force proposes to remove approximately 19,675 linear feet (LF) of existing 3-strand barbwire perimeter fencing and install approximately 46,500 LF of new 7' high vinyl coated chain link security fence with barbed wire outriggers, installation of four (4) new access points, installation of warning signs every 100' on fence, and all necessary utilities associated with the project.

The current barbwire and 7' high chain link section of existing partial perimeter fence was installed in 2001. The destruction of the World Trade Center by terrorist caused an increased need for perimeter security. The 7' chain link fence with outriggers will enhance security of the airfield and the base proper. The proposed fence activities will occur in the following areas:

- Old northeast/west boundary (replace/install approximately 19,675 LF of fencing)
- Perimeter Road (install approximately 8850 LF of new fencing)
- West of the Hazardous cargo loading area taxiway (install approximately 1250 LF of fencing and 1275 LF of outriggers on an existing section)
- South property line along wetland perimeter of runway 15 and 33 (install approximately 12,500 LF of fencing)

To prevent wetland disturbance, the fence contractor will not be allowed to use heavy equipment and will be required to use metal, hand-driven stakes during fence replacement, and installation in wetland areas. This method of construction will not require a project permit from the COE.

Alternatives considered include:

a) No Action, i.e., no new fence installation or replacement,
b) Install new perimeter fencing in all but the wetlands areas, and
c) Executing the proposed action

Under the No Action Alternative, security will not be improved for the flight line and parts of the base. Because heavy equipment will not be used in the wetland areas, there is no environmental benefit to limiting the scope of the proposed project by selecting Alternative-b. The proposed Alternative-c is the only one that meets the security requirements of the base in addition to providing optimum protection of the environment.

CONCLUSION

Based on the findings presented in the EA, a FONSI to the environment is appropriate if the proposed action is implemented. Therefore, an Environmental Impact Statement (EIS) is not required for this project.

The project will be implemented upon approval and after a public review period.

All interested agencies, groups, and persons disagreeing with this decision are invited to submit written comments within 30 days of this notice for consideration by the Charleston Air Force Base Environmental Office. A copy of the EA is available at Charleston AFB Environmental Office and at the Dorchester County Library on Dorchester road. For questions regarding the EA, contact Mr. Harold Deese, Environmental Engineer, (843) 963-2701, e-mail: harold.deese@charleston.af.mil.

SIGNED:

_____ DATE:_____

Karl B. Young, Colonel, USAF
437th AW/CV
Environmental Protection Committee Chairperson

ISSUE TRACKING MATRIX

ISSUE TRACKING MATRIX				
Issues	**No Action**	**Proposed Action**	**Alternative 1**	
Wetlands	No Impact	No Significant Impact	No Impact	
Wildlife	N/A	N/A	N/A	
Plant Life	N/A	N/A	N/A	
Cost	No Cost	Optimum Cost For Desired Results	Decreased	
Schedule	N/A	No Significant Impact	Shorter	
Purpose/Need	Incompatible	Compatible	Partially Compatible	

1.0 PURPOSE AND NEED FOR PROPOSED ACTION

1.1 Purpose and Need

Charleston Air Force Base (CAFB) is not adequately secured to prevent access by unauthorized personnel to the flightline and the installation. The fence project will enhance security of the flight line and Government property and equipment. The current perimeter fencing consists of 7' high vinyl covered chain link fence with outriggers, 3-strand 4' high barbed wire in some areas, and does not exist in other areas. The CAFB Civil Engineering Squadron proposes to remove/replace the barbed wire fence and install a 7' high brown vinyl covered chain link fence with outriggers around the entire base perimeter. The current world situation dictates a real need to enhance security at all military installations.

The proposed action is required for airfield and installation safety, and is planned for the following areas (See Appendix A Map for sections):

- Sections A/B/C: Old northwest boundary (approximately 12,500 LF of fencing, 700 LF along wetlands)
- Sections D/E: Perimeter Road (approximately 16,025 LF of fencing, about 10,000 along wetlands)
- Sections F/G/H/I/J: South property line along wetlands perimeter at runways 15 and 33 (approximately 10,200 LF of fencing along wetlands)
- Sections K/L: West of Hazardous cargo loading area taxiway (approximately 2525 LF of fencing (1275 LF outriggers only), two sections, no wetlands)

1.2 Decision Needed

The decision to be made by the Chairman of the Environmental Protection Committee is whether to install the new fence or not, and if so, how, when, and where it should be installed.

1.3 Scoping Summary

The scope of this Environmental Assessment includes the removal of approximately 19,675 linear feet (LF) of existing 3-strand barbwire perimeter fencing and install approximately 46,650 LF of new 7' high vinyl coated chain link security fence with barbed wire outriggers, installation of four (4) new access points, installation of warning signs every 100' on fence, and all necessary utilities associated with the project.

1.4 Applicable Regulatory Requirements

No Army Corp of Engineers (ACOE) or state permits are anticipated for replacement and installation of the perimeter fence when installed using the construction method described herein without filling/disturbing wetlands (See Ref. 5). The construction method used is the same as used on the fence installation done in 2001 and approved by COE as not needing a permit. A

wetland permit from the COE would be required if wetlands were to be filled during construction activities however, method of installation will alleviate filling of wetlands. A delineation of wetlands was completed in late 1996 and submitted to and approved by the US Army COE, Charleston District in 1998.

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 Detailed Discussion of the Proposed Action

The proposed action requires a contractor to remove approximately 19675 LF of existing 3-strand barbwire perimeter fencing and replace, or install approximately 46,650 LF of perimeter fencing using 7' high chain link fence with 18" barbed wire outriggers. The approximately 66,325 LF fence removal/replacement/installation project is detailed as follows (See Appendix A Map for sections):

- Section A: Remove 700 LF barb-wire and install 700LF of 7' vinyl coated chain link security fence with outriggers, one foot inside the property line. Wetlands involved.
- Section B: Remove the existing 10,750 LF of 4-strand barb-wire fence and install, 10' inside property line, approximately 10,750 LF of new 7' vinyl coated chain link security fence with outriggers, and a 10' cleared security corridor on each side of the fence. The corridor shall be cleared, grubbed, and leveled to the extent necessary for grass cutting equipment to traverse the area. The fence section shall have two access gates. Wetlands involved.
- Section C: Remove 1050 LF of barb-wire fence and install approximately 1,050 LF of 7' vinyl coated chain link security fence with outriggers 1' inside the property line. Wetlands involved.
- Section D: Remove 7175 LF of barb-wire fence and install approximately 7175 LF of 7' vinyl coated chain link security fence with outriggers 1' inside the property line. This is a bid option #2. Wetlands involved.
- Section E: Install approximately 8850 LF of 7' vinyl coated chain link security fence with outriggers and with one access gate, 1' inside the property line. This is a bid option #2. Wetlands involved.
- Section F: Install approximately 2800 LF of 7' vinyl coated chain link security fence with outriggers 1' inside the property line. Major wetlands involved.
- Section G: Install approximately 3100 LF of 7' vinyl coated chain link security fence with outriggers 1' inside the property line. This is bid option #1. Major wetlands involved.
- Section H: Install approximately 3225 LF of 7' vinyl coated chain link security fence with outriggers 1' inside the property line. Major wetlands involved.
- Section I: Install approximately 1075 LF of 7' vinyl coated chain link security fence with outriggers 1' inside the property line. Major wetlands involved.

- Section J: Install approximately 5400 LF of 7' vinyl coated chain link security fence with outriggers 1' inside the property line. Major wetlands involved.
- Section K: Install approximately 1250 LF of 7' vinyl coated chain link security fence with outriggers 1' inside the property line.
- Section L: Install barb-wire outriggers on existing 1275 LF of chain link fence.
- Install warning signs every 100' along fence.
- Install all necessary utilities associated with the project.

Based on the depiction of wetland areas on the *Wetlands Delineation Map*, approximately 21,000 LF of wetlands perimeter is involved. In an effort to prevent filling/disturbing wetlands, the fence contractor will not be allowed to use heavy or tracked equipment in such areas. The contractor will be required to use metal, hand-driven posts for fence installation/replacement in wetlands. By using the above construction method a COE permit will not be required for construction in a wetland.

2.2 Alternatives Considered

Several alternatives have been considered and evaluated in an effort to identify the most feasible and least environmentally damaging approach to the proposed construction activity and still meet the mission and environmental requirements. Alternatives considered include:

- No action.
- Alternative 1 – Fence only the non-wetlands areas.
- The proposed action.

2.3 Detailed Discussion of the No-Action Alternative

With the No-Action alternative, the perimeter 3-strand barbwire fence would not be replaced and additional 7' high chain link security fencing would not be installed. The potential for unauthorized entry onto the base and the flightline by unauthorized individuals and vehicles would remain high. Base and flightline security would continue to be potentially compromised. Minimum mission requirements would not be met.

2.4 Detailed Discussion of Alternative-1

This alternative consists of installing the fence only in non-wetland areas. The total length of wetlands perimeter is approximately 50% of the base perimeter, which means only 50% of the base would have any type of security fencing. Because construction methods will alleviate filling/disturbing wetlands, there is no environmental benefit to be gained by limiting the project to non-wetlands. Hardwood trees greater than 6" in diameter shall be replaced at a ratio of one-1" tree per inch of diameter cut.

2.5 Detailed Discussion of the Proposed Action

The Proposed Action is the preferred alternative. This alternative will provide a high degree of security from all, except the "evildoers". It will meet project requirements such as little or no impact to the environment and still provide optimum base and flightline security. Fence installation activities are not expected to change the contours of wetland areas. Fencing along wetlands perimeter will be done without use of heavy equipment, thus minimizing potential environmental impact. Fence post will be hand driven metal stakes in the wetlands areas. Hardwood trees greater than 6" in diameter shall be replaced at a ratio of one-1" tree per inch of diameter cut.

3.0 AFFECTED ENVIRONMENT

3.1 Introduction

Representatives of the Charleston Air Force Base Environmental Flight performed a site survey on July 25, 2002. The purpose of this survey was to collect site and project information. Limited reconnaissance of the fence line was conducted to develop a site-specific understanding of environmental conditions along the subject fence line.

Wetlands and other natural resources issues at the Charleston Air Force Base are described in detail in the *Final Report for Natural Resources Surveys, Charleston Air Force Base, South Carolina*, October 1997, prepared by Rust Environment & Infrastructure. The proposed perimeter fence will be located near or along delineated wetland areas as indicated on Appendix A map. The sections that follow describe environmental concerns regarding removal, replacement, and installation of a perimeter fence. The discussions are derived primarily, in some cases verbatim, from the *Final Report for Natural Resources Surveys*.

3.2 Location, History, and Current Mission

The CAFB is situated within a developed area north of the city of Charleston, South Carolina. Surrounding development consists of residential, commercial, and industrial areas. The CAFB is bordered to the west by Dorchester Road. Interstate Highway 26 is located northeast of the base. The proposed fence will be located mostly around the perimeter of the installation.

3.3 Description of Environmental Conditions at CAFB

3.3.1 General Land Use

Approximately 85 percent of the land at the CAFB is characterized as "improved grounds." This category includes acreage on which maintenance must be planned and performed. The dominant land use at the CAFB within the improved grounds category consists of airfield, aircraft operations and maintenance areas, industrial, administrative, and housing areas.

The remaining 15 percent of the land at the CAFB is comprised of forests and wetlands. A portion of these areas are classified as "semi-improved lands," which require periodic maintenance. Remaining forests and wetlands are classified as "unimproved lands" that are not maintained by the CAFB.

3.3.2 Soils

Fifteen soil types have been mapped at CAFB. The surface soils are typically sand and sandy loam, with clay content generally increasing with depth. Permeability is relatively higher in surface soils, and decreases with depth and increasing clay content. The decrease in permeability of the clayey subsoil results in short-term saturation of sandy surface soils following rainfall events.

3.3.3 Principal Natural Communities

Virtually all of the natural communities at the CAFB consist of forested wetlands, most of which are located near installation boundaries. Red maple, sweetgum, sweetbay, and black willow trees control the canopy of these wetland communities. Understory communities include viburnum, redbay, elderberry, and privet shrubbery. The herb layer communities consist of soft rush, alligator weed, smartweeds, and chain ferns. An elongated ephemeral gum pond is located in the northwest portion of the installation. The forested wetland is dominated by swamp blackgum, with few red maples around the fringes.

3.3.4 Plant and Animal Life

3.3.4.1 Plant Life

- No federally listed threatened or endangered (T&E) plant species, nor suitable habitat for such species, is present along the base perimeter.
- No federal Species-of-Concern, nor suitable habitat for such species, is present.

3.3.4.2 Animal Life

- No federally listed threatened or endangered animal species, nor suitable habitat for such species, are present along the fence line.
- One federal Species-of-Concern animal, the painted bunting, was observed at two locations (CHTE1 and CHTE2, as described in the *Final Report for Natural Resources Surveys*) at the southern edge of the CAFB at the ends of runways 03 and 33. These areas are remote from the fence line.
- No state listed threatened, endangered, or special concern animal species are present at the CAFB.

The following indigenous animals are common to the area:

- Mammals: White-tailed deer.
- Birds: Eastern kingbird, northern cardinal, blue jay, red-tailed hawk, white-eyed vireo, and American goldfinch.

No reptiles or amphibians reportedly were sighted or heard during the T&E surveys. Suitable habitat is evident along portions of the fence line.

3.3.5 Special Interest Natural Areas

The *Final Report for Natural Resources Surveys* identified one area, the ephemeral gum pond located in the northwestern portion of the base, as a special interest natural area. This habitat provides excellent breeding habitat for amphibians. The pond is not in the proximity of the fence line.

4.0 ENVIRONMENTAL CONSEQUENCES

This section discusses the probable consequences of each alternative on the affected environment.

4.1 No Action Alternative

No environmental consequences are associated with the no-action alternative. The alternative allows for the fence, in its present state to remain in place. This negates the need for construction personnel to access the site, and eliminates the opportunity to impact environmentally sensitive areas. The white tail deer on base would not be potentially trapped and any migratory route that may exist would not be cut off.

4.2 Alternative 1

Alternative 1 reduces potential for environmental impact compared to the proposed action, because wetlands would not be involved. Also, construction cost would decrease because of less fence to be installed plus no wetlands to deal with. The white tail deer on base would not be trapped because any migratory route that may exist would not be cut off in the wetlands areas.

4.3 Proposed Action

The proposed action would have minimal effects on the environment. Delineated wetland areas are clearly marked on the fence map for contractor to recognize, and thereby halt heavy equipment (bulldozers and backhoes) from entering such environmentally sensitive areas. Construction activity along the fence line must be limited to a relatively narrow work zone within these sensitive areas, and fence posts must be installed manually, such as hand driven metal stakes. Trees and bushes may be cut and placed to the side of the fence line. These restrictions will ensure protection of wetland areas where fence construction will take place. The white tail

deer on base may possibly be trapped on base when the fence is completed. Therefore, any migratory route that may have existed will be more difficult to traverse since the deer will have to jump the fence. This is not expected to have a significant effect on the deer population since SC has an over abundance of white tail deer. The 10' corridor on either side of the fence along Section-B, shall be cleared, grubbed and leveled so as to allow grass cutting equipment to traverse the area. The on base deer depredation program will eventually eliminate all the deer and provide a safer flightline for aircraft.

5.0 CONCLUSION

The Proposed Action as described in this document is recommended as being most consistent with the purpose of and need for the project, and with protection of the surrounding environment. Based on the data contained in this Environmental Assessment and contractual limitations that will be placed on the fence contractor for work in wetlands, the Proposed Action will allow for a Finding Of No Significant Impact (FONSI) to the affected environment. Also, no COE permit will be required.

Alternative 1 is considered the second most feasible action. It accomplishes most of the goals of the fencing project. This alternative also is protective of the environment, because the fence is not installed in wetland areas. However, it leaves 50% of the base with no security fence at all.

The third choice, the No-Action alternative, is protective of the environment, but provides no improvement to base security.

6.0 LIST OF REFERENCES

1. Department of the Air Force, 2002, *Statement of Work (SOW) for Design-Build Services for Project DKFX 02-1046 Improve Perimeter Security Fencing at Charleston Air Force Base*, U.S. Air Force Mobility Command, 437 Airlift Wing.

2. Rust Environment & Infrastructure, 1997, *Final Report for Natural Resources Surveys, Charleston Air Force Base, South Carolina*, Contract No. F41624-94-D-8048-0013, October 1997.

3. CAFB Drawing: *Improve Perimeter Security Fencing, Project DKFX 02-1046, 19 June 02*

4. Zapata Engineering, Environmental Assessment (EA) to Replace Perimeter Fence at CAFB, October 1999

5. Department of the Army Charleston District, Corps of Engineers letter RE: SAC# 53-2002-0955(S), Charleston County, dated June 26, 2002

7.0 LIST OF PREPARERS

This report was prepared by Charleston Air Force Base, Environmental Management Office. Listed below are members of the professional staff who have contributed to the document.

Mr. Harold Deese, P.E., Project Manager
Environmental Engineer, CAFB Environmental Flight

Mr. Al Urrutia, Chief, Environmental Plans and Programs
Environmental Engineer, CAFB Environmental Flight

Mr. Keith Thompson, Natural and Cultural Resources Program Manager
Environmental Specialist, CAFB Environmental Flight

8.0 LIST OF AGENCIES AND PERSONNEL CONTACTED

Presented below is a listing of each agency consulted or contacted.

Agency	**Contact**
US Army Corps of Engineers 334 Meeting Street Charleston, South Carolina 29402 Phone 843-329-8044	Mr. Fred Veal
South Carolina Ocean Coastal Resource Management 1362 McMillan Avenue, Suite 400 Charleston, South Carolina 29405 Phone 843-747-4323, ext 132	Mr. Jeff Thompson

APPENDIX –A: PHOTOS OF SITE

PHOTOS

PHOTO 1: At Dorchester Road looking northeast along perimeter at map Section A

PHOTO 2: Looking northeast along perimeter at map Section B

PHOTO 3: Looking southwest along perimeter at map Section B

PHOTO 4: Looking northeast along perimeter at map Section B

PHOTO 5: Looking southeast at corner post at map Section B

PHOTO 6: Looking north along perimeter at map Section B

PHOTO 7: Looking southeast along perimeter at map Section B

PHOTO 8: Looking west along perimeter at map Section C

PHOTO 9: Looking northwest along perimeter at map Section C

PHOTO 10: Looking southeast along perimeter at map Section D

PHOTO 11: Looking northeast along perimeter at map Section D

PHOTO 12: Looking southwest along perimeter at map Section D

PHOTO 13: Looking southeast along perimeter at map Section D

PHOTO 14: Looking west along perimeter at map Section E

PHOTO 15: Looking northwest along railroad tracks and perimeter at map Section E

PHOTO 16: Looking west along perimeter into Fighter Group area at map Section F

PHOTO 17: Looking south along perimeter at map Section F

PHOTO 18: Looking west at fence corner concrete marker at map Section G

PHOTO 19: Looking northwest along perimeter at map Section G

PHOTO 20: Looking west into woods along perimeter at map Section G

PHOTO 21: Looking east at end of runway 03 along perimeter at map Section J

PHOTO 22: Looking west at end of runway 03 along perimeter at map Section J

APPENDIX-B: RECORD OF COMMUNICATIONS

RECORD OF COMMUNICATION

PROJECT TASK: CAFB ENVIRONMENTAL ASSESSMENT (EA) FOR PERIMETER FENCE

COMMUNICATION WITH: MR. FRED VEAL
ARMY CORPS OF ENGINEERS, CHARLESTON

DISTRICT

DATE OF COMMUNICATIONS: 22 JULY 02

TELEPHONE NUMBER: 329-8044

FAX NUMBER:

CONDUCTED BY: HAROLD DEESE

RE: WETLAND LAND PERMITTING REQUIREMENTS FOR FENCE INSTALLATION

SUMMARY:
MR. VEAL STATED THAT NO WETLANDS PERMIT IS REQUIRED DUE TO THE MANNER IN WHICH THE CONSTRUCTION WILL BE DONE SUCH AS USING HAND DRIVEN METAL POSTS AND NOT ALLOWING HEAVY TRACKED EQUIPMENT. SEE REFERENCE 5.

FOLLOW UP

RECORD OF COMMUNICATION

PROJECT TASK: CAFB ENVIRONMENTAL ASSESSMENT (EA) FOR PERIMETER FENCE

COMMUNICATION WITH: MR. JEFF THOMPSON
OCEAN COASTAL RESOURCE MANAGEMENT

DATE OF COMMUNICATIONS: 30 JULY 02

TELEPHONE NUMBER: 843-747-4323, EXT 132

FAX NUMBER:

CONDUCTED BY: HAROLD DEESE

RE: WETLAND LAND PERMITTING REQUIREMENTS FOR FENCE INSTALLATION

SUMMARY:
MR. THOMPSON STATED THAT NO WETLANDS PERMIT IS REQUIRED DUE TO THE MANNER IN WHICH THE CONSTRUCTION WILL BE DONE SUCH AS USING HAND DRIVEN METAL POSTS AND NOT ALLOWING HEAVY TRACKED EQUIPMENT. ALSO, THE 10' CLEARED AREA WILL BE SEEDED FOR MOWING.

FOLLOW UP